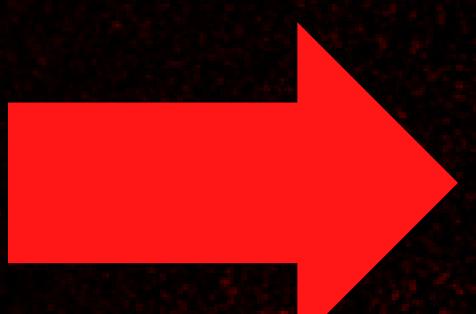


SQL CASE STUDY

EXPLORING NASA & SPACEX MISSIONS!



Real Time SQL Case Study With REAL DATASET

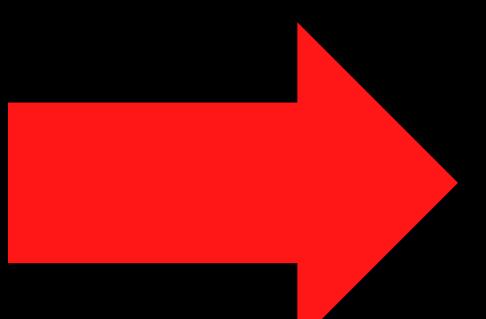


NITISH KUMAR

1) Total Distance Covered During Each Mission ?



```
SELECT Mission_Name, Total_Miles_Travelled  
FROM Missions;
```

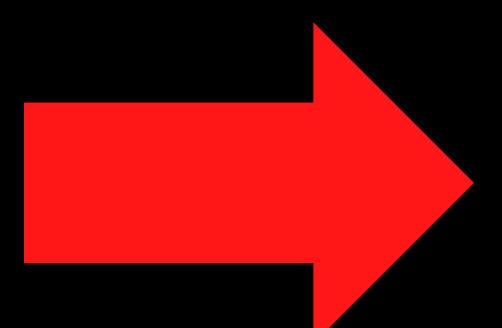


NITISH KUMAR

OUTPUT

Query #1 Execution time: 0.37ms

Mission_Name	Total_Miles_Travelled
Expedition Mission	121347491
SpaceX Crew-9	5400000

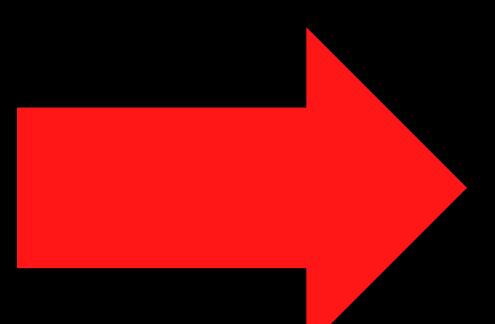


NITISH KUMAR

2) Number of Astronauts Involved in Each Mission ?



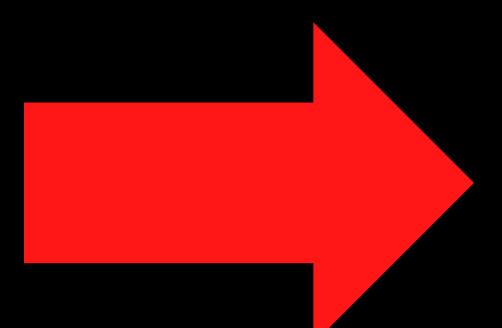
```
SELECT A.Name, M.Mission_Name, AM.Role  
FROM Astronauts A  
JOIN Astronaut_Mission AM ON A.Astronaut_ID = AM.Astronaut_ID  
JOIN Missions M ON AM.Mission_ID = M.Mission_ID  
WHERE A.Name = 'Suni Williams';
```



NITISH KUMAR

OUTPUT

Query #2 Execution time: 0.36ms	
Mission_Name	Total_Astronauts
Expedition Mission	4
SpaceX Crew-9	4

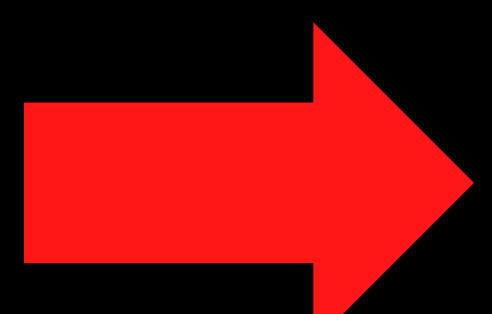


NITISH KUMAR

3) Find the Role of 'Suni Williams' ?



```
SELECT A.Name, M.Mission_Name, AM.Role  
FROM Astronauts A  
JOIN Astronaut_Mission AM ON A.Astronaut_ID = AM.Astronaut_ID  
JOIN Missions M ON AM.Mission_ID = M.Mission_ID  
WHERE A.Name = 'Suni Williams';
```

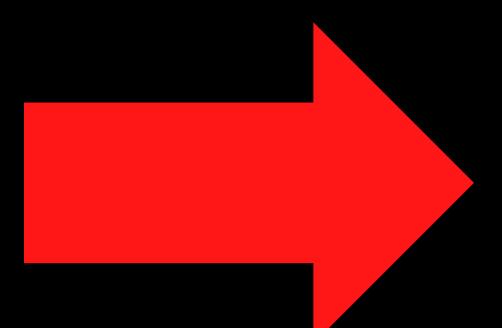


NITISH KUMAR

OUTPUT

Query #3 Execution time: 0.27ms

Name	Mission_Name	Role
Suni Williams	Expedition Mission	Commander

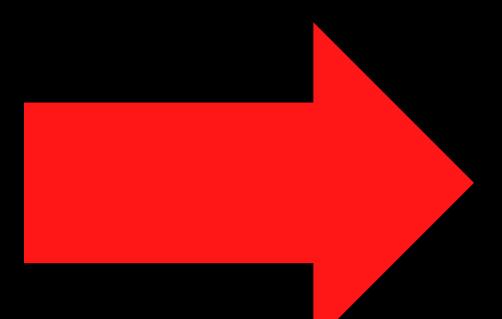


NITISH KUMAR

4) List of Astronauts and Their Roles in Each Mission ?



```
SELECT M.Mission_Name, COUNT(AM.Astronaut_ID) AS Total_Astronauts  
FROM Missions M  
JOIN Astronaut_Mission AM ON M.Mission_ID = AM.Mission_ID  
GROUP BY M.Mission_Name;
```

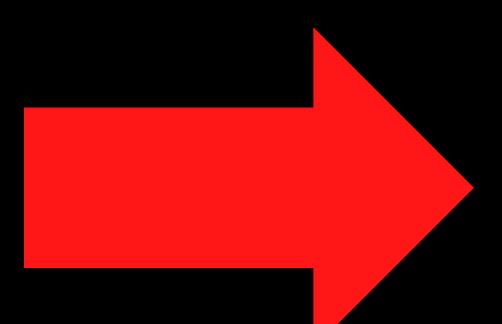


NITISH KUMAR

OUTPUT

Query #4 Execution time: 0.28ms

Name	Agency	Nationality	Mission_Name	Role
Nick Hague	NASA	USA	Expedition Mission	Crew Member
Suni Williams	NASA	USA	Expedition Mission	Commander
Butch Wilmore	NASA	USA	Expedition Mission	Pilot
Aleksandr Gorbunov	Roscosmos	Russia	Expedition Mission	Engineer
Matthew Dominick	NASA	USA	SpaceX Crew-9	Commander
Michael Barratt	NASA	USA	SpaceX Crew-9	Pilot
Jeanette Epps	NASA	USA	SpaceX Crew-9	Mission Specialist
Alexander Grebenkin	Roscosmos	Russia	SpaceX Crew-9	Engineer

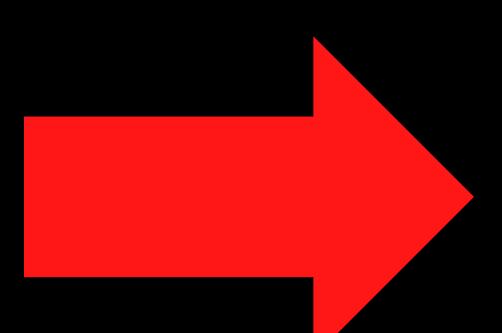


NITISH KUMAR

5) Find the ranking of missions based on the total miles traveled using a window function ?



```
WITH Mission_Ranking AS (
    SELECT
        Mission_Name,
        Total_Miles_Travelled,
        RANK() OVER (ORDER BY Total_Miles_Travelled DESC) AS Rank_By_Miles
    FROM Missions
)
SELECT * FROM Mission_Ranking;
```

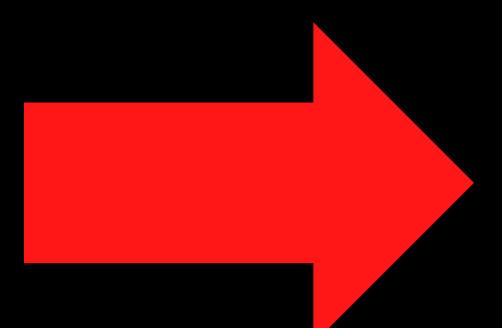


NITISH KUMAR

OUTPUT

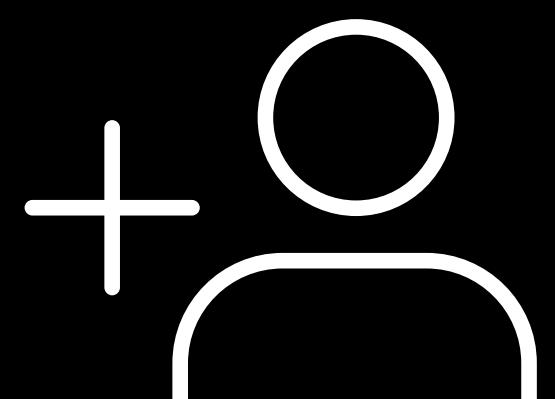
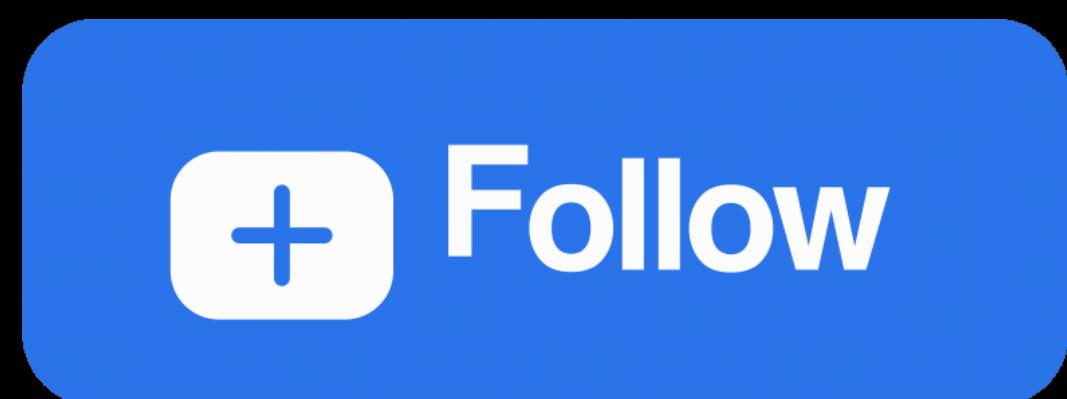
Query #5 Execution time: 0.29ms

Mission_Name	Total_Miles_Travelled	Rank_By_Miles
Expedition Mission	121347491	1
SpaceX Crew-9	5400000	2



NITISH KUMAR

Thank you



NITISH KUMAR